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ABSTRACT

Written materials analyzed in this paper were gathered from work with faculty, students, and administration within higher/postsecondary institutions in inventing the future of education. A wide range of alternative futures is discussed which has emerged from this work, conducted in graduate seminars in short and long term social action research and participatory planning projects with institutions and consortia. Futures invention is described as a discovery method based on claims that the future is open to human choice, decision, and action, if and when persons become clear about their intentions and are prepared to negotiate with others their commitments and actions. The paper focuses on the ways in which these participants chose to understand lifelong learning and its associated educative activities as aspects of the futures of higher/postsecondary education. Reported and discussed in detail are 221 items taken from individual and policy team intentional claims on the future. The items are organized into two main categories: (1) The adult learner as agent, and (2) alternative desirable futures for postsecondary education. Substantive concerns discussed include teaching/learning roles, definitions, activities; organizational arrangements (certification, accreditation, etc.); systems of sanctions and rewards; active/passive relationships with other institutional domains; notions of organizational and social change; and philosophical orientations and practical strategies. (Author/TA)

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ADULT LEARNING AND THE FUTURE OF POST-SECONDARY EDUCATION*

by

Warren L. Ziegler and Grace M. Healy

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PART I

INTRODUCTION

Our aim in this paper is to report out for the first time the ways in which hundreds of participants in futures-invention activities chose to understand adult learning, and its associated educative activities, within the context of alternative futures for higher/post-secondary education. For a number of years, the authors have worked with faculty, students and administrators within institutions of higher/post-secondary education in inventing the future of education. A wide range of alternative futures has emerged from this work, conducted in graduate seminars, in short- and long-term social action research and in participatory planning projects with institutions and consortia.

The materials generated in futures-invention seminars and workshops have, until now, been analyzed and used only in social action research; that is, they have been the basis for the continuing action of participants. This is the first time that these materials have been collectively subjected to analysis in order to identify for persons other than the participants the central thrusts emerging from this wealth of information. The nature and source of the materials is, in the opinion of the authors, sufficiently important to warrant the report.

Participants' claims on the future do not represent "off-the-top-of-the-head" opinions, nor are they commands to the establishment to "shape up". Rather, they are the thoughtful and considered intentions of individuals and groups who are committed to acting on their intentions.

In all of their work with participants, the authors have sought to enable persons to discover new criteria for their actions and to test out in action and legitimate these criteria. The concern has been not merely with knowing or with predicting the future, but with doing something about it.

Too often, the domain of the future is appropriated by the modern tendency to consider all human questions as <u>knowledge</u> questions such as the ones asked by the hard sciences in which certainty is sought through causal relationships and

explanations. That approach unfortunately leads to two consequences: a development of a preventive stance towards the future, and the development of an adaptive stance.

There is another approach to the future. It is heuristic and grounded in the capacity of persons to learn the future (as distinguished from being educated about the future). But the future is not considered primarily the domain of knowledge. It is the domain of action. We know (or hope to know) the past. We act towards the future. The methodology of this third approach is called action-inquiry and its practice is futures-invention. The stance is neither preventive, nor adaptive, it is inventive. The claim is that we should attempt to bring into existence not-yet-occurred states of affairs, new human practices which enable us to organize our social conduct (in all of its forms) in new ways.[1]

Futures-Invention Activities

The activities of futures-invention are a form of teaching and learning the future in which persons aim to enable each other to discover their intentions towards the future, the actions by which these intentions may be actualized in the present and the consequences of these actions. In short, persons are enabled to discover their human possibilities.[2]

The preferred device for futures-invention is a residential workshop involving from forty to sixty working hours. Alternatively, under certain conditions, persons come together for a few hours each week over a period of months (for example, in a seminar format) or over several weekends. The time given to the work is a minimum of forty hours.

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1. For a more extensive discussion of these alternative approaches to the future, see Warren L. Ziegler, "Education and the Future", McGill Journal of Education, Spring, 1977, Vol.XII, No.1.

2. For a more extensive discussion of the futures-invention methodology see Warren L. Ziegler, Grace M. Healy and Jill H. Ellsworth, "Futures-Invention: An Approach to Civic Literacy" in Methods and Materials in Continuing Education, Los Angeles, Klevins Publications, 1976.

Four modes of reflective action are employed in futures-invention: (1) participants work by themselves, as individuals, to explicate their intentional claims on the future (in this case, the future of post-secondary education); (2) participants work in small (three person) facilitating groups to help each other clarify these intentional claims (usually framed for a specific time period in the range of ten to fifty years); (3) participants work together in policy teams (five to fifteen persons) in order to discover possible, collective agreements about their goals, strategies and actions; (4) participants meet together in plenary sessions to be introduced to the specific exercises of futures-invention, to review and critique their work, and to negotiate decisions in the present about their alternative choices for the future.

When participants who come together for futures-invention have a common concern (as is generally the case in workshops), they will form policy teams and negotiate decisions both about alternative choices for the future, and about actions that will bring about those futures. In seminars, it is more often the case that persons work through the activities individually (though with the clarification of other seminar members) and the commitment to action is not a collective one, at least not by members of the given seminar.

In brief, the reflective action of futures-invention is associated with a series of questions that are translated into a set of practical exercises. The exercises include: goal formulation, indicator invention, consequence forecasting, assumption identification, scenario construction, value shift assessment, futures history writing, tactics and strategies, action priorities, and collective action commitment.

Source of Material

For the purpose of this paper, the written materials that were analyzed were taken from the future scenarios developed by the participants individually or in policy teams. These scenarios consist of a goal statement (for times between the years 1980 and 2020), indicators of the goal's accomplishment, forecasted conse-

quences (both positive and negative) of the goal's achievement and assumptions. The scenarios were developed in seven graduate seminars and seven workshops held between 1970 and 1976. Over one hundred persons participated in university seminars which addressed the future of post-secondary education. The majority of these participants were professionals; some were teachers and administrators in colleges and universities; some were based in the medical profession or in government; others were associated with a wide variety of adult education agencies. Workshop participants included teachers, administrators, researchers, some graduate and undergraduate students and consultants associated with these institutions of higher education.

One hundred sixty scenarios, representing the work of over 400 persons, were read and disaggregated into items. These items are essentially predicates (intentional claims) about desirable future states of affairs. Each predicate carries its own ostensible meaning. In this kind of content analysis, the aim is to interpret the material as little as possible, not to guess at what participants meant, but to report it in their own words. (Many items extracted from the scenarios were clearly of the same intent, i.e., identical words were used. These have not been repeated.)

The actual material, consisting of 221 items (131 from individuals and 90 from policy teams), is reported as fully and faithfully as possible so that the reader can come to his/her own judgement about meanings. The only editing consists of eliminating words used by some participants to make full sentences (as distinguished from predicates) and adding words in the text when necessary, for clear grammar. It is the judgement of the authors, after careful reading of each scenario, that removal of the predicates from their contexts has changed neither the clarity nor the meaning of the participants' intended goals as explicated in those scenarios.

Items which represent an <u>individual's</u> intentional claim on the future are

designated (I); those representing a policy team's collective intentional claim on the future are labelled (T). It may be of interest for the reader as he/she considers the items to note that, in many instances, individual statements tend to greater generality, while policy team predicates reflect the specificity of an organizational or social action setting.

The items have been organized into two main categories: the first (Part II) focusing on the adult learner as agent (one who has intentions about his/her learning and is prepared to make choices about means and ends) and the second (Part III) focusing on alternative desirable futures for post-secondary education. The organization into categories and subcategories is done in an attempt to render participants' intentional statements intelligible without damaging their integrity. (In the intitial abstracting of predicates from the scenarios, twenty-one groupings were found. Additional careful examination and clustering produced the categories and subcategories reported here.)

Approximately seventy-five percent of the predicates come from explicit goal statements. The remaining were found in indicators and consequences. The reader should note that goals, consequences and indicators are defined as follows: the goal is a not-yet-occurred future state of affairs, something that the individual or team is committed to bringing about, something that is judged good, that is, in their judgement, it ought to be. Indicators answer the question: how do you know that your goal is achieved? Indicators are not the goal, but stand for its existence; they are signs of the reality of the goal; they tell concretely what is happening relative to persons, places, institutions, organizations, behaviors and practices. Indicators are concurrent with the goal's achievement. Consequences answer the question: what are the impacts, positive and negative, of the goal after its achievement? The assumption is not made that because a goal is good for some, it is good for all. On the contrary, assuming that a goal is achieved and fully operarational, individuals and teams seek to identify the goal's positive and negative impacts on persons, groups, organizations and settings.

PART II

THE PRINCIPLE OF LEARNING AGENCY

A. The Learner as Agent: Responsibility for Choice and Decision

In the futures-invention seminars and workshops, one major starting point of many participants was an explicit focus on the (adult) learner as agent, i.e., a person who has intentions about his/her learning and is prepared to take responsibility for making choices about its ends and means.[3] We might call this the pro-active stance towards adult learning as distinguished from the reactive stance. Clearly, this is a starting point, not an ending point. Many practical, strategic questions are not yet answered when a participant explicitly states an intention to bring about a state of affairs such that the learner is in charge of his/her own learning. Much of what we report out in Part III has to do with practical questions, such as: where and when does this learning take place, under what conditions, for what purposes, with what consequences for the learner, for social institutions, for post-secondary education and for new institutional formations for teaching and learning.

Nevertheless, even though the implications and practical meanings of this intention to put the adult learner in charge are not explicated in this section, the centrality of this notion for the future of lifelong learning is undisputed. Participants were announcing, as it were, a "new" principle for post-secondary education: whatever the wide range of alternative arrangements for the administration of these learning activities, the responsibility for initiating and and choosing among them ought to reside with the learner.

As some participants put it:

(I) - the individual is best qualified to make decisions about his/her own alternative educational purposes and processes

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3. For a more extensive discussion of agency and personhood as it relates to adult learning, see Warren L. Ziegler, On Civic Literacy, Working Draft, Educational Policy Research Center, Syracuse Research Corporation, June, 1974.

(T) - opportunity for all adults to evaluate/select/pursue choices of learning endeavors

(I) - learning and evaluation should be self-directed; each person should set his/her own standards

(I) - (in a desirable future), learners generate a commitment to continuing education, develop their own educational goal(s), do their own evaluation (formative and summative), develop their own contingency management system and their own strategies

In making the principle of the learner as agency central to their invention, some individuals focused on a correlative proposition about the enabling functions of educational delivery systems:

(I) - "learning strategies" become part of the core school curriculum

(I) - post-secondary educational programs become tailored to fit learners' styles, capabilities, biophysical and psych-social strengths and needs

(I) - independent study becomes the central approach of cooperative extension home economics with self-directed learning available to everyone

(I) - individualized instruction (is in existence); the student selects the content, method and pace of learning

(I) - (there should be) the development of new diagnostic instruments to enable learners to know if a particular learning experience meets their interests and needs, intrinsic motivation, physical and intellectual ability

(I) - development of an effective learning ecology in post-secondary education; propsective learners choose teachers, styles, learning environments

How and why post-secondary educational delivery systems might more effectively enable the development and maturation of the learner as agent constitutes a major focus of much of the invention of the future of lifelong learning. But the agency of the learner is a predominant theme with which participants grappled in many complex ways, even when they did not enunciate the principle as explicitly as stated above.

(T) - the student (college-level) takes responsibility for his/her learning

(T) - (it is the) prerogative of the individual to evaluate and be evaluated

(T) - students should determine their own learning needs

(T) - learners should develop programs and assessments

(T) - programs (college level) should be varied, responsive to the diverse needs of learners

To emphasize the primacy of the learner as agent in lifelong learning has clear implications for the activities of teaching. If one holds to this principle intention, how is one to understand what a teacher is supposed to do? After all, the historical role of teacher in the higher education enterprise has been the legitimized locus of expert knowledge and authority in educational matters. Some participants addressed this question explicitly. Their focus, however, was as much on a new understanding of teacher-learner activities as on more formal role relationships between "teachers" and "students". (See also Part III, Sections A.5 and B.2,3,4.) To put it another way, that formal, historic role relationship gets unglued, but is not yet replaced by a new, formal role relationship. Rather, the focus is on teaching as an enabling activity, a support to the learner as agent, in which the learner as agent includes the activity of teaching both self and others. Most of this focus comes from participants in workshop policy teams rather than from the seminars.

(T) - the faculty role changes - the role of advisor becomes primary

(T) - there should be heterogeneous groupings of teacher-learners and learner-teachers

(T) - no person shall be labelled as either a teacher or a student

(T) - teachers should be facilitators

(I) - teachers and students should be matched for the compatibility of their learning styles

(T) - to teach is to model behaviors

And finally, moving beyond the delivery system to society:

(T) - each individual in the community should be teacher/learner/worker

B. The Learner as Person: the Self-Actualization Theme

As a principle, the notion of the learner as agent contains a radical but also generalized challenge to post-secondary education delivery systems. By radical, we mean that the principle goes to the roots of what it means to be an adult learner. By generalized, we mean that while the intention is provocative, it requires a range

of translations into the practices of persons and their collective (including educational) institutions. It is reasonable, after all, to ask: for what purposes is the learner to manage and control his/her learning? The nature of the analytic activities promoted by a futures-invention approach generally results in participants explicating further their meanings and intentions rather than resting their case on the sole announcement of their principal goal for the future. Much of this additional translation emerges when participants are invited to address two additional categories of invention: indicators and consequences (both positive and negative).

In indicator invention, as we have said earlier, participants are asked to state as clearly and concretely as possible the indicators on the basis of which they would claim that their goal formulation has been actualized at some specified future time. In consequence forecasting, participants are invited to set forth both the positive and negative consequences of the achievement of their goals.

The self-actualization theme emerges in goal formulations, indicator invention and consequence forecasting. It constitutes a popular response to the question of why learners should be agents in behalf of their own learning. Some put it this way:

(I) - greater personal control over events, less alienation

(I) - maximize individual potential - with a consequence of increased polarization and unrest

(I) - transcendence of socialization

(I) - (but) excessive self-actualization?

And some participants turned over the learning coin to its other side of education:

(I) - education should enable each person to become all he is capable of being

(I) - the educational goal should be total self-actualization, to the top level

Education should be:

(T) - for the self-actualization of the individual

(T) - for the development of collective creativity

(T) - for personal growth

(T) - for the realization of full intellectual and social potential

(T) - for self-directedness

(T) - for individual ability to control and direct change

(T) - education should provide resources necessary for human growth

Referring to the college enterprise explicitly, some participants repeated the theme of self-actualization:

(I) - the college community should realize its human potential to the maximum

(I) - community colleges should become humanizing institutions, (paying attention to) all facets of human development

And one participant, focusing on information management (see Part III, Section D), put it this way:

(I) - maximize potential through easily retrieved knowledge

C. The Learner as Person: Emotional, Cognitive and/or Spiritual Competences

The theme of self-actualization and human potential, as many educators know, carries with it a large range of philosophical and psychological claims which are very appealing to a sophisticated, post-Freudian, post-World War II generation who have seen the extraordinary growth of higher education as a delivery system for adult learning and who have also been bombarded with the metaphors of mass institutions, depersonalization, alienation, impersonal forces, dehumanization, and the like. It is important to note how powerfully the self-actualization theme has taken hold among persons invited to state their intentions for the future of post-secondary education. It is also important to note that, like concommitant notions of lifelong learning, self-actualization must be one of the more complex themes and practices to which persons concerned about the future of education direct their attention.

Many participants, particularly in the seminars, attempted a more explicit identification of the purposes, indicators, and consequences of learning agency.

Whether their language clarifies or conflates the human potential theme is questionable, but their aim was to concretize and specify the notion of the learner as person by iterating one or more competences associated with that personhood. These competences included such items as:

(I) - rational and intuitive (non-verbal, holistic) modes of consciousness, bio-feedback, psychic (internal and between persons)

(I) - more openness, trust, feeling, good self-image, mutuality

(I) - more caring, less ego, less selfishness

(I) - more appreciation of each person's worth

(I) - increase in tolerance for ambiguity

Once again, some participants focused their intentionality on the reciprocal role of education to nurture the development of these competences:

(I) - (education should) prepare adult learners for more open, sensitive, interpersonal communication

(I) - students and faculty should care about each other

(I) - learning settings should focus on the full range of human abilities, emotions, body senses, interpersonal skills, intellectual capacity, ESP, etc.

(I) - education should shift its orientation from the production and acquisition of knowledge to its application and use, i.e., values

(T) - liberal education (should be) for the development of person and community

(T) - (education) for specialization and synthesis - for self-directedness and responsibility

(T) - education for critical thinking

(T) - humanistic learning

In reviewing these participant claims about desirable futures, we are impressed with their powerful humanistic orientation. Such claims place the person at the apex of future educational developments. To the extent to which these participants act on their perceptions about the purposes of adult learning, those intentional actions will seriously challenge historic practices in post-secondary education. The capacity of post-secondary organizations to facilitate the expression of agency and self-actualization among adult learners over the remainder of this century will

no doubt constitute a major factor in the question of whether or not these participants will work within or by-pass the existing delivery systems.

The translation of the principle of learning agency into additional language which begins to render that principle more intelligible does not stop with the generalized theme of self-actualization. A number of participants, particularly in the workshops, moved very quickly to a theme of political competence.

D. The Learner as Person: Political Competence

The historical relationship between education and political self-governance in American society is well documented in much of the seminal literature in the field, from Thomas Jefferson to Horace Mann to John Dewey to Paolo Freire (who, while not an American, has had a recent and strong influence on adult educators' rediscovery of the relationships between literacy training, consciousness raising and political liberation of oppressed groups). A number of participants understood the future of lifelong learning and post-secondary education as a more explicit working out of this ancient theme. Some participants put it this way:

(T) - (education) for full potential and for control over their lives

(I) - (the aim of) post-secondary education should be to facilitate citizen participation in the formation of social policy through the political process, i.e., improve political education

(I) - (and as an indicator) society will be composed of highly informed citizenry

(I) - the acquisition of practical wisdom to act on personal and social intentions

Some participants attempted to concretize this intention through depicting the formation of new components in the educational delivery system:

(I) - (the formation of) a Community Institute of Law, in which citizens acquire the expertise necessary to the creation of their public life

(I) - at least one college in each state, federally funded - the Future Grant College - which would provide resources for persons to learn the knowledge and skills of making public policy, to bring about a humane society, domestic and international

(T) - competencies for moral planning for the future

(T) - individual participation in all organizational and societal decision-making

(T) - technical competence and ethical perspective

(T) - competences of intelligent political and economic decision-making

(T) - the empowerment of members of higher education to impact in social, economic, and educational spheres

(T) - (the college) should have a strong effect on economic decision-making in the community

(T) - all U.S. organizations, business, industry, etc. to encourage participation and development of skills for the office of citizenship

The relationship between the learner as agent in charge of his/her learning and the learner as person does not stop with an iteration of holistic and/or specific competences. For the notion of personhood cannot be understood solely or even mainly in individualistic or atomistic terms. To be sure, some participants did stop there. We take that focus on the individualistic locus of intentions as a critique of the mass or systems character of higher/post-secondary education and of other national systems. When invited to state their intentions for the future within the context of lifelong learning and higher/post-secondary education, some participants were caught in the historical polarity between society and the individual . . . and put their emphasis on the full-flowering of the individual human being.

Note, however, that the theme of political competence already begins to transcend that individualistic focus. Politics, as understood by the participants, takes place within a configuration of persons acting on, or with, or against each other to define and bring about some collective ends. In the next section, we report out participants' perceptions of desirable societal ends which they formulated as goals or which, they judged, would be achieved through the exercise of persons' learning agency.

E. Societal Ends/Consequences/Indicators: Social Corollaries of Learning Agency

In making their intentional claims on the future of lifelong learning and education, the majority of seminar and workshop participants were prepared to set

forth the societal referents to these claims. To put it another way, most participants in futures-invention who focused on an educational and learning context believe in the efficacy of education and/or adult learning. They accept the strong presumption in American society that some, perhaps most, human and social problems can and should be addressed through educative action, whether within or outside of conventional delivery systems. It should be noted that the futures-invention methodology does not explicitly invite or implicitly coerce participants to uphold the educational efficacy belief. The explication of societal goods (desirable futures), whether as goal formulations, indicators of goal achievement or consequences of goal achievement has emerged, we judge, from the continuing celebration of the instrumentalism historically associated with education in American society. That instrumentalism has suggested that education should never be viewed as an end in itself, but rather as a means to some other ends.

One of the tensions which has confronted participants in these futures-invention activities follows from this notion of instrumentality. Once beyond the principle of the learner as agent (i.e., in addition to being an agent for his/her own learning), what else is there? Deliberate, self-initiated learning for its own sake is an emancipating starting point for persons invited to state their intentional claims for the future, for it enables them to eschew all concerns about the legitimacy of such learning responsibility. But that legitimacy is exactly the point of education. Education is legitimated learning, whether as means or ends, as instructional methods, course content, times and places and/or social benefits.

Accordingly, participants have employed other, additional justifications for the principle of learning agency, which is why we have termed this a <u>starting point</u> in much futures-invention about lifelong learning and higher/post-secondary education, <u>but not an ending point</u>. As participants developed their futures-scenarios, consisting of goals, indicators, positive and negative consequences and assumptions, they have been caught in the question of why anyone would want to engage in deliberate

learning beyond the fact that they do so, and the moral claim that they ought to do so. Some participants addressed this tension by employing the theme of human potential, of self-actualization. Some participants further specified one or a set of competences. But in turn, competences are never theoretical; they are the willingness and ability to engage in practices with other persons. Some participants specified, directly or by implication, political practices: effecting policies, effecting change, affecting the life of the public. By far the majority of participants, however, returned to the theme of educational efficacy: using education to bring about a better world. The contents of that "better world", of course, covered the waterfront.

1. One of the major ends sought was the re-establishment of a sense and practice of community. Some participants put it this way; they envisioned:

   (I) - communal, non-hierarchical society

   (I) - greater community cohesion and pride

   (I) - local community should be the education/action setting; individuals are socialized to be non-violent, respect all persons, appreciate their common humanity

   (I) - promoting international community

   (T) - education for a sense of community

   (T) - (the) college should be the focal point for community development and change

   (T) - education for the development of new communities - new ways of working, relating, problem-solving

2. Another major end sought was the emergence of a sense of social and institutional responsibility:

   (I) - less political corruption - more social and institutional responsibility

   (I) - greater expenditure for social goods rather than individual goods

   (I) - greater reward resulting from an increased accountability of results - a service society

   (T) - social/moral/ethical responsibility

   (T) - global justice

(T) - business and government: an increasing interest in social responsibility

(T) - cooperation for educative problem-solving among traditionally antagonistic groups: labor-management, student-teacher, nations

3. Another social concern which loomed large in the participants' minds was health care. Education should enable:

(I) - reduction of public anxieties

(I) - decrease in the number of persons needing medical assistance

(I) - health care roles and services deterined not by licensure or title but by demonstrated ability to perform specific responsibilities (foreshadowing the credentialing issues we will address in Part III, Section A.4)

(I) - development of elective health care programs to meet the needs of individuals, not perpetuate professionals; emphasize prevention and individual responsibility for health

(I) - education for decision-making about the issues of life-sustaining systems

(I) - computerization of health care, up to individuals to plug in

4. Some futures-inventors addressed the relationships among education, work and leisure:

(I) - use education to prepare and place people in the professions they desire

(I) - people should set and evaluate their own learning and work objectives

(I) - greater flexibility and freedom in individual work objectives

(I) - flexibility in career ladders in health care delivery, with joint work-learning programs

(I) - a network of "edu-work" communities, combining rigorous scholarship with experiential learning and transcendental meditation

(T) - work and leisure are redefined

(T) - the relationships between students, graduates and the college should be formal, lifetime and supportive, focusing on problem-solving in jobs and private lives

(T) - students should move in and out of business and the university

(T) - increased options for work, education and leisure

5. Still another theme which emerged in these futures-invention activities had to do with crime and justice:

(I) - the elimination of prisons and the development of community self-help centers

(I) - a decrease in crime

(I) - the elimination of victimless crimes

(T) - the decline of assembly line operations, e.g., classrooms, hospital beds, prison cells, military reservations and police stations

6. Social justice, distributive issues and economic equity also constituted a major category of futures-invention among the participants:

(I) - elimination of competition

(I) - guaranteed annual income

(I) - profit sharing, no "unemployment"

(T) - education should contribute to the reform of other organizations and institutions in order to promote social justice

(T) - cooperation replaces competition

7. The problem of scarce resources and their management emerged as still another theme in the "efficacy of education" argument:

(T) - effective and efficient use of the world's resources

(T) - improved management of scarce resources

(T) - highly developed control of resources

The waterfront was indeed broad. Education ought to:

(I) - solve complex problems in an ever-changing world

(T) - support and develop the family as the basic unit of society

(T) - transmit culture intentionally

(T) - support education for a profitable "old age"

Where does all of this leave us? Several points can be suggested.

First, whether the focus is on adult learning or post-secondary education, the scatter of intentions is wide-ranging. Clearly, participants intend that the future of post-secondary education should include a great deal of social problem-solving.

Second, the entire learning and educational enterprise comes alive in these inventive activities. Systems maintenance and hegemony, efficiency and financial issues, the "numbers" game, all dear to the heart of institutional planners and

administrators, simply disappeared way down on the list of priorities when these persons were asked about their intentions. And we want to repeat that the majority of participants were professionally involved in the delivery systems of post-secondary education, as faculty, administration, board members, undergraduate students, adult students and practitioners taking a leave to pursue graduate degrees. Education and learning is, according to these participants, vitally tied to the life of our society and to the full development of the persons who are members of that society. Feasible, practical, or not, problems in society and among its members are viewed as the agenda of lifelong learning and post-secondary education.

Third, a new understanding of the locus of learning is clearly emerging in the minds of these participants. There is a significant tension between learning and education. Education is seen primarily as instrumental, for other ends, which the participants were prepared to explicate and to bring about. Whether these same participants judge that present delivery systems in higher/post-secondary education are adequate to these tasks will be discussed below.

Clearly, learning begins to be viewed as the locus of responsibility and choice. The approach of psychological and behavioral research on human learning receives almost no mention in any of this work. Rather, learning is seen as a human enterprise intrinsically associated with problems of value, choice and decision, responsibility, intentionality and the like. At least some participants were saying: We intend to be in the business of learning. If that is education's business, good. If it is not, then education (as system, as institution, as legitimating belief) should go the way of all flesh.

But, fourth, means-ends and means-consequences problems historically associated with education now become problems for adult and lifelong learning. Instead of education for what, it now becomes learning for what. In either case, it is clear that there is an increasing tension between education and learning among adults and

for adults, and that the future of lifelong learning and post-secondary education depends in some measure on how that tension is understood and worked out in practice.

One way to arrive at answers to this question is to examine what futures-invention participants said about the delivery system of higher/post-secondary education as part of their inventive activities.

PART III

ALTERNATIVE FUTURES FOR POST-SECONDARY EDUCATION

During the decade of the Seventies, post-secondary education has become a catch-all phrase which includes a multitude of delivery systems and their components. Adult and continuing education, higher education, recurrent education and life-span education represent but a few of the institutions and ideas which lay claim to owning post-secondary education. What post-secondary education means depends in large measure on who is using the terminology, where they are coming from and how they define their agendas. In this paper, we mean it to include everything which is involved in the administration of settings and the delivery of opportunities for adult learning, because in futures-invention, as we shall see, participants understood post-secondary education to include everything.

In research science, so broad a definition would be useless because researchers would not be able to agree on when they had instances of the concept and when they did not. In futures-invention, of course, this broadness of definition and ambiguity of meaning is not a research problem because a great deal of the futures-invention activity entails participants negotiating with each other the meanings of their intentions. In analyzing the material generated in futures-invention activities, however, researchers must confront the problem of conceptual clarity if they aim to render intelligible to readers the material they report on.

Therefore, we have assigned to post-secondary education a second criterion

in order to provide clarity to the organization of participants' ideas reported out in Part III. This criterion has to do with the activity of legitimation. That is to say, we understand post-secondary education to constitute some set(s) of adult learning activities and opportunities which have won the approval of the legitimating instruments for education in American society. At issue is the question, which (kinds of) adult learning activities should be legitimated by designating them as falling within the unbounded domain of post-secondary education? Historically, adult learning practices have been legitimated through the employment of one or more of five major instruments:

(1) naming the practice by designating its domain of concern (e.g., consumer education, degree-credit education, literacy training, continuing professional education, etc.);

(2) intellectualizing the practice (e.g., when the academic community commences formal research, graduate instruction and/or professional training in the domain of concern);

(3) bringing the practice under the influence of one or more of the central control mechanisms of formal education (e.g., to certify, credential, license, etc.);

(4) bringing the practice within the domain of public policy formation, and allocating public-expenditure budgets to support the practice;

(5) organizing the practice such that it develops articulate interest-group, lobby, and/or professional support.[4]

Many participants in futures-invention workshops and seminars argue that the future of adult learning should include practices, new institutional formations and purposes which are not presently legitimated. Some participants argue against the legitimating activity per se, attempting to re-invent a state of pristine spontaneity in adult learning activities in which no person can or should question the legitimacy of any other person's learning. But that neo-primitivist position, a kind of luddite approach to educational institutional formation, runs counter to all that we under-

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4. Warren L. Ziegler, The Future of Adult Education and Learning in the United States, Final Report under Project Grant No. OEG-0-73-5232, Educational Policy Research Center, Syracuse Research Corporation, Syracuse, New York, February, 1977.

stand about what it means for persons to engage in learning. Whether done "individually", alone, with a book, or in a meadow listening to the birds, learning is always a social practice in which, at some inevitable point or circumstance, another person is involved in approving, supporting, criticizing, judging the learning activity, its intentions, performance and/or consequences. In this sense of education as legitimated learning (thus, making it social, deliberative or purposeful, accountable and controllable), we understand some of the participants' futures-inventions to constitute an initial clarion call for legitimating in the future a set of learning activities which at present (or in the past) are not part of the post-secondary education delivery system.

In sorting out the large number of different intentional claims on the future of post-secondary education made by seminar and workshop participants, we have employed these legitimating criteria and instruments to distinguish among the participants' different claims, agendas and concerns. Three major categories were developed to organize this material:

Category A - a specific focus on improving, modifying, adding to or deleting one or more of the central control and guidance instruments used to legitimate adult learning as post-secondary education

Category B - new organizational arrangements, roles and/or programs within the post-secondary education system which change or add to its activities through modification

Category C - new institutional formations for the learning activities, opportunities and settings for adults outside what is presently considered post-secondary education

A - Control and Guidance Mechanisms

There are a host of such mechanisms. As we shall see, all of them are subject to improvement, modification, addition or deletion within the alternative futures judged desirable by some of the participants.

1. Age: In a front-loaded system of lock-step schooling, it is not surprising that some participants focused explicitly on this control feature, as follows:

Future states of affairs will be such that:

(I) - formal education is completed by age 16

(I) - adult education starts at age 12

(I) - there will be a merging of the educational activities of youth and adults

(I) - state consitutions read "provide education for all regardless of age and time"

(T) - all educational institutions cease factoring in age

(I) - there will be no youth ghettos

(T) - there will be cross-age learning arrangements

2. Time: More than anything else, recurrent education shifts around the time for education, work, and leisure, intermixing them in new sequential ways which substantially modify the conventional life-span and societal time factor in education. Some participants addressed the time factor. There will be:

(I) - after 18, periodic studies leaves for all persons in the ratio of one study period to six periods of everything else

(I) - study subsidies at the level of the salary average for the past two years; over a lifetime, ten years out of forty

(I) - elimination of time periods for completion of programs

(I) - (and as a consequence) higher dropout rates in compulsory education as persons can return to the learning system more easily

3. Access and Funding: Who participates in post-secondary education is seen by some participants as a matter as much of financial support and equity as of age and time. It is interesting to note, however, that in distinction to the pressing public policy issues of equality of access in the 1960's, only a few participants addressed this issue in the researched seminars and workshops.

(I) - remove financial barriers to post-secondary education; (it) should be for all

(I) - increase federal expenditures to individuals in post-secondary education

(I) - adult education should be an integral part of the total education system, financed by local and state taxes and federal subsidies

Two participants, in their consideration of funding/access issues, went to the heart of the control factor:

(I) - money should be given directly to individuals, not to institutions

(I) - credit vouchers should be given to all adults by the federal government, to be spent on any learning

Shifting or modifying the factors of age, time and/or access/funding might have a substantial impact on post-secondary education, but participants placed a greater focus on more conventional, institutional control and guidance mechanisms, such as credentialing, certification and licensure, teacher roles, and public policies and laws.

4. Credentials, certification and licensing, etc.: Perhaps more than in any other single area, participants focused on these central control mechanisms in their approach to the future of lifelong learning and post-secondary education. We might call this approach "going for the jugular", for these instruments constitute the central, legitimating factors which meliorate or control the relationship between the distribution of educational and non-educational (societal) benefits.

(I) - elimination of degrees and certificates as the link between education and work

(I) - elimination of compulsory education and credentials

(I) - elimination of accrediting associations; it should be done by government

(T) - self-regulation by professionals, accountability by clients

(T) - a wide ranging delivery system for lifelong learning, with professional and para-professional competences evaluated on a continual basis by self, peers and clients

(I) - certificates of competency instead of degrees

(T) - (there should be) less interest in credentialing (certificates and degrees) and more interest in demonstrated personal ability

(T) - the need for licensing agencies no longer exists; instead, control is (lodged) in the hands of professionals and consumers themselves

5. Teaching roles and controls : testing, evaluating, grading, reimbursement, promotion and tenure: The legitimized teaching role includes, of course, a great deal more than the activities of teaching. The role itself constitutes a constellation of legitimated control points within the post-secondary education system. Many

participants wanted to modify or eliminate specific features of that role.

(I) - replace the tenure system with an extensive evaluation process

(T) - (there should be) new criteria for advancement

(I) - elimination of the grading system

(I) - increase in competency-based testing

(T) - (teaching-learning) arrangements should be contractual and tutorial (1-1), with technologically assisted individual learning

(T) - faculty collective bargaining should be on the work content, less on money, with the rewards being in the work itself

(I) - all supportive (education and teaching) services should be on a contract basis

6. Shifting control and guidance factors through policies and laws: Finally, participants focused some intentional strategies on policy and legislative instruments: these still had to do with modifying, changing, adding to or deleting one or more control and guidance mechanisms.

(T) - consumers have the veto power over all policy-making with service organizations, educational or otherwise

(T) - guarantee (by law) of the right and opportunity for lifelong learning

(T) - labor unions and professional organizations should monitor the right to lifelong learning

(T) - (there should be) a national policy for lifetime education as part of the public education system

In summary, the preceding are sets of claims about alternative possibilities for "opening up" the delivery of learning opportunities and the administration of learning settings in post-secondary education. By "opening up" we mean rendering control less hierarchical and more participatory and making the delivery systems more amenable to internal change and more accessible to adult learning activities not previously encompassed within them (i.e., legitimated).

In short, these participants rather carefully targeted their intentions. While the impacts might be comprehensive, over the longer run, these approaches focus specifically on one or another single traditional mechanism for control and main-

tenance within existing delivery components of post-secondary education.

B. New Arrangements Within Post-Secondary Education

In this section, we report out participants' perceptions of new, desirable organizational arrangements, roles, programs, and missions within post-secondary education which change the delivery of learning opportunities and the administration of learning settings by the method of addition or modification. With each of these proposals, the larger delivery system remains either intact or, at least, identifiable.

1. Scope and size: Here participants were concerned with both qualitative and quantitative changes in post-secondary education. They were opting for:

(I) - a higher general level of education

(I) - post-compulsory education should be individualized, consultative, and recurrent throughout the life-span

(T) - wide range delivery system for lifelong learning; competencies evaluated on continual basis by self/peers/clients

(I) - education as a multi-structural enterprise, with all members of the society involved throughout their lives

(T) - a revolution in K-12 through lifelong learning

(I) - school buildings used for all persons, all learning

(I) - a giant expansion of the teaching-learning system

(I) - a great expansion in learning resource persons

(I) - effective post-secondary education provided to a growing number of citizens at minimal cost, seeking viable alternatives to rigorously structured college and university extension, and alternative choices to traditional post-secondary education in institutions

(T) - persons (now) excluded by the traditional systems should be included

(I) - all segments of post-secondary education (collegiate and non-collegiate) to be regarded as equal in status as institutions of higher learning

2. New Programs or Agencies within Post-Secondary Education: These intentions are concerned with developing new program thrusts or units within post-secondary education, sometimes referring explicitly to a component within a college or university of which the participant was a member.

(T) - the (college) library should serve as an information center supporting lifelong learning through telecommunications

(T) - teacher-training agencies should be increased, with teacher-training for adult learners

(I) - non-traditional approach to teacher preparation, exposing candidates to a variety of human experiences

(I) - SUNY divisions of higher education should establish "Centers for Career Alternatives"

(I) - establish compulsory student (international) exchange program within Jesuit higher education

(I) - establish an Office of Discouraged Learners, which identifies and counsels discouraged learners

(I) - residential/experiential learning for one year for credit to develop positive intra-personal relationships

(I) - establish Value Learning Centers with post-secondary education

3. Organizational Mission, Structure, Governance: Many of these intentions come from participants inventing the future within specific action-settings and organizations, such as liberal arts colleges. Thus, much of this thrust represents an explicit focus on changes in organizational missions, structures, and governance. Some individual participants gave their intentions this kind of specificity though not directing their proposals and commitments to individual units within post-secondary education.

(T) - lifelong learning should be the primary thrust

(T) - we should shift to a school of continuing studies rather than remaining a traditional undergraduate college

(T) - consolidation of departments within higher education

(I) - schools should become differentiated, moving from centralized uniformity to becoming creatures of their various communities

(I) - (post-secondary education) should aim at goal-oriented learning - a person's

(I) - (there should be) participatory government in higher education

(I) - a college owned and governed by its members (students, faculty and administration)

(T) - norm for decision-making should be value and service orientation

(T) - teachers must be inter-disciplinary

(T) - the faculty should be responsible for a total liberal education, not just for a discipline

4. Organizational Culture and Inter-Personal Relationships: It would be surprising if most of the intentional claims iterated in this paper would not impact on organizational climate and culture and on the feelings which persons would have for and about each other within learning settings. A few participants focused on these matters explicitly as first-order intentions.

(T) - open communications between students and faculty

(I) - faculty should be available 24 hours a day

(I) - better feelings among faculty, administration, students and trustees

In Summary, it can certainly be said that, taken item by item, these intentions are not radical departures from existing missions, structures, activities or roles within post-secondary education. They represent a wide scatter of concerns, a kind of chipping away at post-secondary education in incremental rather than traumatic ways. The approach is to work within the system rather than to by-pass it. What follows next, however, is quite different.

C. New Institutional Formations Outside of Post-Secondary Education

This section focuses on participants' intentions to design settings, opportunities and arrangements for adult learning activities outside of what is presently considered the domain of post-secondary education. Clearly, at this point we enter the ambiguous arena of definitions and bounded categories. In the first sense in which we used it, post-secondary education can be meant to encompass almost any learning activity. And in inventing its future, participants did not hesitate to state what they thought ought to be done, and then call that "doing", post-secondary education. Were we to leave the matter at that level of unboundedness, however, a disservice would be done to those many persons within that domain of adult learning who are concerned with naming what they are doing in order to distinguish it from something else.

Naming is perhaps the most fundamental activity for rendering a human activity intelligible, manageable, knowable, controllable. Not to name some phenomenon is to keep it out of cognition, which of course does not mean out of existence. Many important human, social, natural activities are not named in Western cognitive, analytic, positivistic culture. Such phenomena are difficult to research. A major problem in futures-invention has to do just with naming - what should I call what I intend to do or bring about? To the extent to which a participant's intentions constitute, for him or for her, an invention or a discovery, it is often difficult to decide what name to give it. Sometimes old names are given to new activities, and the questions begin: what are you talking about?

Given this problem, futures-invention can be understood as a hermeneutical activity among persons who share some matter of concern and who take their time to clarify, tease out, sometimes even emancipate new meanings for their intentions and actions. The quality of that intensive experience, however, can not easily be transmitted in a research report. Nevertheless, we are confronted with the same problem. What do we (the authors) mean when we designate a category of new institutional formations outside post-secondary education? Doesn't that presuppose that we claim to know what lies inside post-secondary education? We do not make that claim. Rather, we have added a definitional feature to the category which we call legitimacy. That concept itself is seminal in social theory and sociology, and as such is also fraught with certain definitional problems.

Nevertheless, it is our hypothesis that many participants were concerned with inventing new meanings, new settings, new activities, new missions, new methods which are not generally understood as presently within the domain of post-secondary education. This is because these missions, activities, etc., are not yet legitimated by one or more of the five legitimating instruments employed to encompass adult learning within post-secondary education. We are not judging whether or not such legitimation will or should occur. Some participants were absolutely unconcerned

with this problem; others were clearly aware of it. What follows, then, might be best understood as the participants' challenge to any reader who is concerned about adult learning and the future of post-secondary education. What are the conditions (if any) under which you, the reader, would be prepared to support one or more of these new institutional formations, to legitimate them, to bring them within an emerging domain of post-secondary education?

In analyzing this material, we found it helpful to organize it into four categories, three of which rather clearly have to do with level of aggregation. Some participants focused their intentions at the level of community, neighborhood, or family, all characterized, implicitly or explicitly, by intimacy, trust, sharing, etc. Some focused their intentions at a much broader level of aggregation, which we call society. Still others laid their intentional claims for new institutional formations at the international level. A fourth group of participants were unclear about (the importance of) these distinctions, and instead talked about new networks, structures and agencies.

1. The Community Locus: Perhaps the most striking conclusions we uncovered in this material is the quest among a large number of participants to encompass adult learning activities within settings which are community-based, rather than city, state, region or nation-based. This conclusion is, we believe, directly related to the starting point of this report, in which we focused first on the principle of learning agency and the learner as person. This is, we judge from the material, a radical critique of the systems-building approach to post-secondary education. Researchers, policy-scientists and policy-makers have adopted, in recent years, a systems-analytic approach to understanding educational phenomena and a systems-building approach to controlling these phenomena. In much of what follows in this section, that approach to educational (i.e., social) phenomena is deliberately eschewed in favor of locating new institutional formations within community. Keep in mind that all of these predicates should be preceded by such phrases as,

"I intend to . . . ", "My goal for the future is . . . ", "What we aim to bring about is . . . ", "What we should do is . . . ", all within a futures-perspective ranging from ten to fifty years.

(I) - community education concept of providing catalytic and coordinating role in identification and satisfaction of community needs, governed by a community education council

(I) - community self-help centers

(I) - Community Institutes of Law engaging in educational research and consultation on all social, legal, political issues

(T) - economically self-sufficient communities, impacting on the values of society

(I) - the local community should be the educative action setting within which individuals are socialized to non-violent behavior, and learn to appreciate persons and human community

(I) - community learning seminars

(I) - professional community learning facilitators

(T) - network of neighborhood learning communities

(I) - network of local learning collectives and cooperatives, with support structures at regional levels

(I) - centralized information service and counseling within a community

(I) - open, trans-disciplinary, problem-oriented education for adults through non-conventional instructional methods; traditional academic departments would be abolished; the workplace, home, and local study centers would replace schools and classrooms

(T) - organizational structure in place within each local community for the education of adult citizens

(T) - community-based learning centers with a local support system

(I) - community centers for education and recreation, providing psychological support

(I) - community utilization resource bases - educational facilities in the broadest sense - getting at community problems - criminal justice, etc. - education for living

. . . and within the community locus, sometimes an emphasis on family and home:

(I) - home as the central educational institution of society

(T) - home-based teaching/learning centers

(I) - organizational arrangements replaced by "family" arrangements for the elderly, etc.; persons and groups replace organizations and institutions

(I) - continuous learning and action in family, workplace and community

2. The Societal Locus: In these cases, the participants' designs and inventions were cast at the level of aggregation of the society. In effect, the participants were talking about the whole cloth of adult learning throughout society.

(I) - freely available organized settings for adults who want basic knowledge (i.e., compulsory education), but with resources geared to the learners

(I) - political, cultural, social, educational entities cooperate in a single delivery system

(T) - all U.S. organizations take on an educational function, the development of human persons, for the personal and the public domain

(T) - lifelong process for enabling the individual as a member of society to take responsibility for changing goals, methods, and results of education, work, and leisure

3. The International Locus: Some participants placed their foci of intentionality on the international domain:

(T) - world-wide federation for global civic literacy (differentiate what one will and will not accept)

(T) - international resource center, not-for-profit, with exchange programs among governments, industry, and business

(T) - world-wide learning centers to facilitate decision-making world-wide

(T) - post-industrial world institutions for integrated learning experiences; networks have replaced educational institutions

4. Networks, Structures, Agencies, and Centers: In this section, the problem of naming is particularly acute because of reasonable arguments by some post-secondary educators that almost any organizational entity can (or is already, or should be) encompassed within post-secondary education, providing it has to do with adult learning activities. Some participants would argue otherwise. Our judgement is that in the preponderance of the literature on post-secondary education, most of these inventions would be left out because they are not yet legitimated and/or because they are not controllable by one or another of the central guidance and control mechanisms traditionally associated with education.

(I) - leisure time centers

(I) - socio-emotional network - older citizens and "helpers"

(T) - agencies for self-definition, value clarification and resource identification

(I) - network of social change workshops to promote individual growth and development

(I) - counseling system; get the right education to individuals

(T) - educational cooperative for the maturation of local talents

D. The Technological Alternative: Learning as Information Management and Retrieval

One interesting feature of this report, to this point, is the almost total absence of technological solutions to the problems and prospects for the future of adult learning and post-secondary education. We have saved this material for last, not because of any normative predelictions but simply because it constitutes a powerful, if simplistic, way of cutting across or through almost every category of presentation and analysis employed in Parts II and III of this paper.

Indeed the unanimity of focus is so strong that the material speaks for itself. These participants have all understood their desirable futures to be a matter of harnessing electronic communications, information management and the ineluctable computer in some mix to the chariot of adult learning, thereby pulling the post-secondary education system into its (inevitable) future. In American society, one dare not discount our love affair with high technology.

(I) - interactive educational and professional retrieval system; generates large number of options in response to individual goal input

(I) - post-compulsory learning de-institutionalized; linkages are advanced libraries and information systems

(I) - telecomputer system; accessed at all households; no fee for search

(I) - public utility operationalizes a system of computer and TV monitors to provide information necessary to continuing learning

(I) - computerization of all work, vacation, travel, study opportunities

(I) - home videotape recorders; cooperative extension offers independent study programs

(I) - child-youth learning centers; core (curriculum) from mass media resources

(I) - computerized communications and information retrieval system operating on brain waves

(I) - coordination of teachers and learners through a central data bank

(I) - students have own educational learning environment; interact with a computer programmed to deal with needs and personality of the student

(T) - communications learning and retrieval system

(T) - international learning referral/retrieval system allowing individuals to have freedom to enter/exit at will

(T) - educational network; community based with data bank of resources and consortium of individuals, groups and institutions

(T) - libraries - international communications experts

(T) - multi-disciplinary, multi-lingual indexermentors operate information retrieval modules

(T) - instantaneous intercultural/international communications/information retrieval

Some participants clearly intended to design alternative futures for adult learning which fit within the framework of post-secondary education. Other participants clearly intended to exclude their "inventions" from that burgeoning system, and particularly from its higher education component. Among those who were at home in inventing within the system, their aim was to "open up" the delivery of learning opportunities and the administration of learning settings by a modification or deletion of some of the control features or by adding new organizational missions, arrangements or programs. Among those participants who chose to by-pass the system, there was a powerful emphasis on the principle of learning agency and the actualization of that agency within the setting of community rather than system.

Discounting ideological debate and rhetoric, we see these perspectives as two ends of a continuum rather than as hard-and-fast categories either for analysis or policy formation. At issue is the question of central control and legitimation. What kinds of adult learning activities should be legitimated? How unbounded, robust, pluralistic and uncontrolled should be the domain of post-secondary education? What do we lose and what do we gain by designating it as a system and acting as if

it were? Should new legitimating instruments be designed, and by whom? Does legitimation lead to compulsion?

PART IV - SUMMARY

Are there any larger conclusions or hypotheses which can now be drawn from the materials reported out and analyzed in this paper? At this stage of the analysis of futures-invention activities, probably not. The material speaks for itself in a certain way: it provokes the reader to render judgements on the work, the desirability, the value of the ideas and practices which these participants pulled out of their own imaginations and intentions. Certain caveats and suggestions, however, may be stated.

First, the material reported out in this paper, like the primary experiences of futures-invention, is not survey data. It is also not collective priority rankings of previously assembled items. Finally, it is not a set of recommendations by "clients" of the system to administrators, officials and policy-makers. It is either much more or much less, depending on how the reader views the activities of futures-invention. Unfortunately, it is difficult, if not impossible, to develop an understanding of futures-invention without the experience of futures-invention, as it is an approach to the future fundamentally different from the predominant modes of forecasting and methods of planning employed in our society.[5]

We remind the reader of the source of these data and the essential features of futures-invention which generated this data: its participatory character; its emphasis on the person as agent impacting on his or her future; its concern for emancipating intentional claims for alternative, desirable future states of affairs; its methodology for enabling participants to move from their futures back to the present in such a way that participants can devise practical strategies and

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5. For a more detailed discussion of futures-invention as a form of long-term planning see Warren L. Ziegler and Grace M. Healy, "The Planner as Teacher and Learner", in International Journal of Educational Planning, Vol.II, No.3, January, 1976.

and develop action commitments to bring these futures into existence; and most important of all, its approach to these activities as matters for teaching and learning.

Participants did not stop with the production of the scenarios from which the data for this paper were drawn. They moved beyond an explication of their intended futures to the identification of tactics and strategies. It was their intention to bring about their futures, not to recommend them to others. The tactics and strategies are not analyzed in this paper, because they belong to the participants in their action settings and must therefore conform to the ethical principles and methods of social action research.

It is appropriate for the reader to ask: What are the conditions under which I am prepared to support one or more of the ideas reported out? Alternatively, the reader might ask him or herself: Am I prepared to join with others within my own action settin to invent my future and its future? Persons concerned with the future of adult learning and post-secondary education must begin by making their own inventions for that future rather than letting it happen, or leaving it to others. To put it another way, persons who are prepared to essay the question: What do I intend to bring about, why, and how, will find it most difficult to appropriate to themselves other persons' intentions. They will want to discover their own, and confront the difficult question of their commitments to take action in the present to bring these intentions into existence.

Of course, futures-invention, like everything else, is no panacea. We shall welcome being informed of other inventive approaches to lifelong learning and post-secondary education from our colleagues, whose comments on and critique of this paper we solicit.

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